

Title (en)
MULTILAYER BACKING ABSORBER FOR ULTRASONIC TRANSDUCER

Title (de)
MEHRSCHICHTTRÄGERABSORBER FÜR ULTRASCHALLWANDLER

Title (fr)
ABSORBEUR MULTICOUCHE DE RENFORT POUR TRANSDUCTEUR À ULTRASONS

Publication
EP 2230904 A4 20140521 (EN)

Application
EP 08856738 A 20081208

Priority
• US 2008085914 W 20081208
• US 558407 P 20071206

Abstract (en)
[origin: WO2009073884A1] A multilayer backing absorber for ultrasonic transducers operative in thickness mode has acoustic impedance and absorption for a given sensitivity and bandwidth. The multilayer backing absorber provides for transducer performance with a smooth frequency response curve. A transducer has a backing layer comprising layers of metal, polymer, and/or adhesive arranged so that a given impedance and absorption are obtained. Side boundaries between gross multiple layer regions with metal and without metal make some angles to the surfaces so that reflection from the back surface of the absorber does not reflect back to the piezoelectric layer. A multilayer absorber comprises a metal layer on each polymer layer and is configured as a periodic grating wherein the direction and period is different for each layer, and wherein the acoustic wave in the absorber is scattered or diffracted.

IPC 8 full level
A01N 3/00 (2006.01); **B06B 1/06** (2006.01); **G10K 11/00** (2006.01)

CPC (source: EP US)
B06B 1/06 (2013.01 - EP US); **G10K 11/002** (2013.01 - EP US); **Y10T 156/10** (2015.01 - EP US); **Y10T 428/24132** (2015.01 - EP US); **Y10T 428/3154** (2015.04 - EP US)

Citation (search report)
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• [XAY] US 2003085635 A1 20030508 - DAVIDSEN RICHARD [US]
• [YA] US 5241512 A 19930831 - ARGY GILLES [FR], et al
• See references of WO 2009073884A1

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Designated contracting state (EPC)
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WO 2009073884 A1 20090611; CN 101969764 A 20110209; CN 101969764 B 20140604; EP 2230904 A1 20100929; EP 2230904 A4 20140521; EP 2230904 B1 20200520; IL 206787 A0 20110731; IL 206787 A 20160421; US 10486197 B2 20191126; US 2009147627 A1 20090611; US 2014050054 A1 20140220; US 2017320092 A1 20171109; US 8570837 B2 20131029; US 9713825 B2 20170725

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